



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No. 9378

Application of:

FRAZIER, D. et al.

Group Art Unit: 3625

Serial No. 09/943,708

Examiner: ZURITA, JAMES H.

Filed: August 31, 2001

For: **IMPROVING CUSTOMER SATISFACTION THROUGH
CUSTOMER IDENTIFICATION AND SERVICE-TIME
MEASUREMENT**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Sir:

This is an Appeal Brief in furtherance of the Notice of Appeal filed on February 2, 2007. In light of this Brief, Applicant asks the Board of Patent Appeals and Interferences to reconsider this application.

CERTIFICATION OF MAILING UNDER 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 5/2/07.

By: Michelle George
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(I) REAL PARTY IN INTEREST

The present application is assigned to NCR Corporation.

(II) RELATED APPEALS AND INTERFERENCES

There are currently no known active appeals or interferences related to the present application.

(III) STATUS OF CLAIMS

The above-identified patent application was filed on August 31, 2001 with original claims 1 through 41. Claims 1, 3-24 and 26-41 remain active and stand rejected. Copies of the claims in their current form are provided in the Claims Appendix (section VIII) of this Appeal Brief.

(IV) STATUS OF AMENDMENTS

The U.S. Patent and Trademark Office issued a Final Official Action in the prosecution of the present application on October 2, 2006. In response to this Final Official Action, Applicant filed a Notice of Appeal, a Pre-Appeal Brief Request for Review, and an Amendment to claim 23 on February 21, 2007. A Notice of Panel Decision from Pre-Appeal Brief Review was issued on March 9, 2007 holding that the Pre-Appeal Brief request was improper and a conference would not be held. It is not known whether the Amendment to claim 23 filed on February 21, 2007 has been entered.

An Amendment Under 37 CFR §§41.33 and 1.116 is submitted herewith. In this §1.116 Amendment, claim 23 has been rewritten to overcome the rejection of the claim under 35 U.S.C. §112. This Amendment is equivalent to the Amendment filed on February 21, 2007.

(V) SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1

Claim 1 recites a computer-automated method for use by a service establishment in providing services to a customer, the method comprising:

acquiring a signal from a device carried by the customer during a visit to the service establishment (*see, e.g.*, Application, page 6, line 26 through page 7, line 4; Figure 5, steps 500-505);

deriving from the signal information that allows identification of the customer; using this information to identify the customer and to retrieve archived information about previous interactions with the customer (*see, e.g.*, Application, page 7, lines 5-16; Figure 5, steps 515-525),

analyzing the archived information to identify a product or service of interest to the customer (*see, e.g.*, Application, page 8, lines 3-10; Figure 5, steps 545);

assessing the quality-of-service received by the customer during the visit (*see, e.g.*, Application, page 7, lines 17-23; Figure 5, steps 500, 510, 530, 535);

deciding that the quality-of-service received by the customer during the visit was below a quality-of-service threshold (*see, e.g.*, Application, page 7, lines 22-23; Figure 5, step 540); and

offering the identified product or service to the customer at a discount before the customer leaves the service establishment (*see, e.g.*, Application, page 8, lines 3-14; Figure 5, step 545-550).

Claim 15

Claim 15 recites a method for use by a service establishment in measuring a customer's wait-time in a service lane, the method comprising;

receiving a signal from a device carried by the customer when the customer reaches a first checkpoint (*see, e.g.*, Application, page 6, lines 26-30; Figure 5, step 500);

initiating a time-monitoring sequence upon receiving the signal (*see, e.g.*, Application, page 7, lines 4-5; Figure 5, step 510);

receiving another signal from the device when the customer reaches a second checkpoint (*see, e.g.*, Application, page 7, lines 17-19; Figure 5, step 530); and

completing the time-monitoring sequence upon receiving that signal (*see, e.g.*, Application, page 7, lines 17-23; Figure 5, step 535).

Claim 23

Claim 23 recites a network of computer systems for use in providing services to customers of a group of service establishments (*see, e.g.*, Application, page 6, lines 1-6; Figure 3), the network comprising:

(a) local computer systems (*see, e.g.*, Application, page 4, lines 13-20; Figure 2, LOCAL COMPUTER SYSTEM 210) that are located at the service establishments, each of which is configured to:

collect information identifying customers of the service establishment and information about previous transactions with those customers (*see, e.g.*, Application, page 6, lines 1-21; Figure 4, steps 400-410); and

when a customer is visiting the service establishment:

receive information identifying that customer (*see, e.g.*, Application, page 7, lines 5-16; Figure 5, step 515);

assess the quality-of-service received by the customer during the visit (*see, e.g.*, Application, page 7, lines 17-23; Figure 5, steps 500, 510, 530, 535); and

if the quality-of-service received by the customer during the visit is below a quality-of-service threshold, assist in delivering an offer to compensate the customer for the inadequate service (*see, e.g.*, Application, page 7, lines 22-23; Figure 5, step 540); and

- (b) a data-warehouse system (*see, e.g.*, Application, page 5, lines 18-22;

Figure 2, DATA WAREHOUSE 240) configured to:

receive from each of the local computer systems the information about the products and services purchased by customers and the information identifying those customers (*see, e.g.*, Application, page 6, lines 1-26; Figure 4); and

when a customer is visiting one of the service establishments, receive from the service establishment the information identifying that customer and, in response, deliver to the service establishment information about the products or services previously purchased by that customer for use in delivering the offer to the customer (*see, e.g.*, Application, page 5, lines 22-26).

Claim 24

Claim 24 recites a computer system for use by a service establishment in providing services to a customer, the system including an executable program that causes the computer to:

receive a signal acquired from a device carried by the customer during a visit to the service establishment (*see, e.g.*, Application, page 6, line 26 through page 7, line 4; Figure 5, steps 500);

receive information that allows identification of the customer (*see, e.g.*, Application, page 6, line 26 through page 7, line 4; Figure 5, steps 505);

use this information to identify the customer and to retrieve archived information about previous interactions with the customer (*see, e.g., Application, page 7, lines 5-16; Figure 5, steps 515-525*);

analyze the archived information to identify a product or service of interest to the customer (*see, e.g., Application, page 8, lines 3-10; Figure 5, steps 545*);

assess the quality-of-service received by the customer during the visit (*see, e.g., Application, page 7, lines 17-23; Figure 5, steps 500, 510, 530, 535*);

decide that the quality-of-service received by the customer during the visit was below a quality-of-service threshold (*see, e.g., Application, page 7, lines 22-23; Figure 5, step 540*); and

before the customer leaves the service establishment, create an offer to deliver the product or service to the customer at a discount (*see, e.g., Application, page 8, lines 3-14; Figure 5, step 545-550*).

Claim 36

Claim 36 recites a computer system for use by a service establishment in measuring a customer's wait-time in a service lane, the system including an executable program that causes the computer to:

receive a first signal acquired from a device carried by the customer when the customer reaches a first checkpoint (*see, e.g., Application, page 6, lines 26-30; Figure 5, step 500*);

initiate a time-monitoring sequence upon receiving the first signal (*see, e.g., Application, page 7, lines 4-5; Figure 5, step 510*);

receive a second signal acquired from the device when the customer reaches a second checkpoint (*see, e.g., Application, page 7, lines 17-19; Figure 5, step 530*); and

end the time-monitoring sequence upon receiving the second signal (*see, e.g.*, Application, page 7, lines 17-23; Figure 5, step 535).

(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Pursuant to the Final Official Action dated October 2, 2006, claim 23 stands rejected under 35 U.S.C. §112 as being indefinite due to the use of the term “inadequate.” Claims 1, 3-24 and 26-41 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,574,603 issued to Dickson et al.

(VII) ARGUMENT

Rejection of claim 23 under 35 U.S.C. §112

As stated above, an Amendment Under 37 CFR §§41.33 and 1.116 is submitted herewith, wherein claim 23 has been rewritten to overcome the rejection of the claim under 35 U.S.C. §112.

Rejection of claims 1, 3-24 and 26-41 under 35 U.S.C. §103(a)

Claims 1, 3-24 and 26-41 stand finally rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,574,603 issued to Dickson et al.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach or suggest all the claim limitations.

The rejection of claims 1, 3-24 and 26-41 under 35 U.S.C. §103(a) is respectfully traversed, as (1) there is no suggestion or motivation, either in the cited reference to Dickson et al. or in the knowledge generally available to one of

ordinary skill in the art at the time of the invention, to modify the reference to teach the invention recited in any one of claims 1, 3-24 and 26-41 of the present application, and (2) the prior art reference to Dickson et al. does not teach or suggest all the claim limitations of claims 1, 3-24 and 26-41 of the present application.

Independent claim 15 recites a computer-automated method for use by a service establishment in providing services to a customer, the method including the steps of assessing the quality-of-service received by the customer during the visit; and deciding that the quality-of-service received by the customer during the visit was below a quality-of-service threshold. Similarly, independent claim 23 recites a network of computer systems for use in providing services to customers of a group of service establishments, the network including local computer systems that are located at the service establishments, each of which is configured to collect information identifying customers of the service establishment and information about previous transactions with those customers; and when a customer is visiting the service establishment to assess the quality-of-service received by the customer during the visit; and if the quality-of-service received by the customer during the visit is below a quality-of-service threshold, assist in delivering an offer to compensate the customer for the inadequate service. And independent claim 24 recites a computer system for use by a service establishment in providing services to a customer, the system including an executable program that causes the computer to assess the quality-of-service received by the customer during a visit; and decide that the quality-of-service received by the customer during the visit was below a quality-of-service threshold.

Applicant has reviewed the cited reference to Dickson et al. and can find no teaching or suggestion of the limitations concerning (1) assessing the quality-of-service received by the customer during a visit; and (2) deciding that the quality-

of-service received by the customer during the visit was below a quality-of-service threshold recited in claims 1, 23 and 24. In the discussion of independent claims 1, 23 and 24, the Official Action cites column 17, lines 18-37, and column 18, line 62 through column 19, line 13 as teaching these limitations. The referenced sections of Dickson et al. are provided below.

Column 17, lines 18-37, recites:

Once the order is placed, received and associated with the transponder in normal fashion (blocks 500-510), indicia of the order is transmitted to the transponder (block 528) and the transaction is effected (block 530) in normal fashion. At this point, the customer position detector 46 will monitor for the presence of a transponder via the interrogator 62 (blocks 532 and 534). Once a transponder is detected, the customer position detector 46 will forward the transponder indicia to the food preparation area 40 through the QSR controller 108. This allows for the food preparation operators to timely prepare a customer order based on the customer's approach to the pick-up window (block 536). This information may also be sent to the pick-up operator to indicate customer position. The customer will proceed along the drive-thru lane until the pick-up window is approached where the transponder is detected by the order pick-up interrogator 58 (blocks 516 and 518). The transponder ID or indicia is received by the QSR electronics, and the operator is informed of the order corresponding to the customer at the window (blocks 522-526).

Column 18, line 62 through column 19, line 13 recites:

Once the identification indicia, order and financial information are transmitted, it is ultimately received by communication electronics associated with the QSR's order processing system (block 514). As noted, the information may be directly or indirectly transmitted via any type of ground-

based or satellite communication network. Furthermore, information may be received at a fuel dispenser, near a fuel dispenser, or directly by the quick-serve restaurant. At this point, the order is sent to a food preparation terminal for processing (block 516). The order is processed and payment is effected, preferably by authorizing payment via a remote authorization or transaction authority (block 518). As discussed below, the order may be processed immediately or delayed based on the location of the vehicle to ensure the order is timely processed. Next, an order confirmation, order total and/or order ID is transmitted to the IVC (block 520). The IVC will ultimately receive and store the confirmation, order totals and/or order ID (block 522). This information may also be displayed to the occupant in the vehicle (block 524).

The excerpts provided above describe the operation of an in-vehicle ordering system. Column 17, lines 18-37, describes a process for monitoring the approach and location in a drive-thru lane of a customer. Column 18, line 62 through column 19, line 13, describes a process for directing an order to a food preparation terminal, and processing the food order and payment for the order.

Nowhere in the excerpts provided above, does Dickson et al. teach or suggest the limitations of (1) assessing the quality-of-service received by the customer during a visit; and (2) deciding that the quality-of-service received by the customer during the visit was below a quality-of-service threshold. The referenced sections describe order placement and processing, but include no teaching concerning quality-of-service. It is accordingly believed that claims 1, 23 and 24, as well as the claims which depend therefrom, are patentable over Dickson et al.

Independent claims 15 recites a method for use by a service establishment in measuring a customer's wait-time in a service lane, the method including the

steps of: receiving a signal from a device carried by the customer when the customer reaches a first checkpoint; initiating a time-monitoring sequence upon receiving the signal; receiving another signal from the device when the customer reaches a second checkpoint; and completing the time-monitoring sequence upon receiving that signal. Similarly, independent claim 36 recites a computer system for use by a service establishment in measuring a customer's wait-time in a service lane, the system including an executable program that causes the computer to: receive a first signal acquired from a device carried by the customer when the customer reaches a first checkpoint; initiate a time-monitoring sequence upon receiving the first signal; receive a second signal acquired from the device when the customer reaches a second checkpoint; and end the time-monitoring sequence upon receiving the second signal.

Applicant has reviewed the cited reference to Dickson et al. and can find no teaching or suggestion of the limitations concerning initiating and completing a time-monitoring sequence. In the discussion of independent claims 15 and 36, the Official Action cites column 17, lines 18-37; column 22, lines 12-28, and Figure 11C as teaching steps for initiating and completing a time-monitoring sequence. Column 17, lines 18-37 has been set forth and discussed above. Column 17, lines 18-37 has been set forth and discussed above. Column 22, lines 12-28 recites:

The basic operation of this embodiment begins (block 400) by alternately transmitting from the top and mid-mount antennas (block 402). The central control system 50 or dispenser control system 80 will monitor for responses from transponders within one of the interrogation fields (block 404). The control system will continue to monitor for a transponder response until a signal from a transponder is received (block 406). The control system will next determine from which transmission field the transponder is responding (block 408). In this embodiment, where the

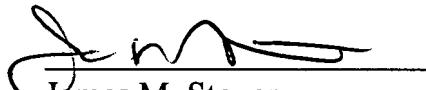
transmission fields alternate, the control system will simply determine if a transponder response was received during a time period when the top or overhead-mount antennas were generating the interrogation field or if the response occurred during the time the mid-dispenser transmit antenna 251 was generating the interrogation field.

The excerpt for Dickson et al. provided above describes a process for monitoring the location and position of a transponder using multiple antennas which alternate sending interrogation signals. Each antenna sends interrogation signals during a different time period. The position of the transponder is determined by identifying the interrogation time period when contact is made with the transponder.

The operation described in column 22 is clearly different than the process recited in claims 15 and 36. The excerpts of Dickson et al. provided above do not teach or suggest a method or system for use by a service establishment in measuring a customer's wait-time in a service lane which includes steps for the steps for initiating and completing a time-monitoring sequence. It is accordingly believed that claims 15 and 36, as well as the claims which depend therefrom, are patentable over Dickson et al.

Review of the present application and claims with consideration of the foregoing comments, and reconsideration of the rejection of claims 1, 3-24 and 26-41, are respectfully requested.

Respectfully submitted,



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(VIII) CLAIMS APPENDIX

1. (Previously Presented) A computer-automated method for use by a service establishment in providing services to a customer, the method comprising:
 - acquiring a signal from a device carried by the customer during a visit to the service establishment;
 - deriving from the signal information that allows identification of the customer; using this information to identify the customer and to retrieve archived information about previous interactions with the customer,
 - analyzing the archived information to identify a product or service of interest to the customer;
 - assessing the quality-of-service received by the customer during the visit;
 - deciding that the quality-of-service received by the customer during the visit was below a quality-of-service threshold; and
 - offering the identified product or service to the customer at a discount before the customer leaves the service establishment.

2. (Canceled)
3. (Previously Presented) The method of claim 1, where assessing the quality-of-service received by the customer during the visit includes measuring the amount of time taken to serve the customer and comparing the measured amount to a threshold amount.
4. (Original) The method of claim 3, where the method also includes using the archived information about previous interactions with the customer in calculating the threshold amount.

5. (Previously Presented) The method of claim 1, where assessing the quality-of-service received by the customer includes measuring the amount of time that the customer waits in a service lane provided by the service establishment.

6. (Original) The method of claim 5, where measuring the amount of time that the customer waits in the service lane includes:

initiating a time-monitoring sequence upon acquiring the signal from the device; and

completing the time-monitoring sequence when the customer reaches a checkpoint in the service lane.

7. (Original) The method of claim 5, where measuring the amount of time that the customer waits in the service lane includes:

acquiring a signal from the device when customer reaches a first checkpoint; and acquiring another signal from the device when the customer reaches a second checkpoint.

8. (Original) The method of claim 5, where measuring the amount of time that the customer waits in the service lane includes measuring the customer's waiting-time in a drive-thru service lane provided by the service establishment.

9. (Original) The method of claim 8, where acquiring a signal from a device carried by the customer includes acquiring a signal from a transponder carried on the customer's automobile.

10. (Original) The method of claim 1, where retrieving the archived information includes requesting the archived information from a database system.

11. (Original) The method of claim 1, where retrieving the archived information includes retrieving information collected by the service establishment during one or more previous visits by the customer.

12. (Original) The method of claim 1, where retrieving the archived information includes retrieving information about the customer collected and shared by more than one service establishment.

13. (Original) The method of claim 1, where acquiring a signal from a device carried by the customer includes acquiring a signal from a transponder of a type that is meant to be carried in the customer's pocket.

14. (Original) The method of claim 1, where offering the product or service to the customer includes using an electronic terminal at the service establishment to generate a printed coupon.

15. (Original) A method for use by a service establishment in measuring a customer's wait-time in a service lane, the method comprising;

receiving a signal from a device carried by the customer when the customer reaches a first checkpoint;

initiating a time-monitoring sequence upon receiving the signal;

receiving another signal from the device when the customer reaches a second checkpoint; and

completing the time-monitoring sequence upon receiving that signal.

16. (Previously Presented) The method of claim 15, further comprising:
comparing the measured wait-time to a threshold value; and
if the measured wait-time exceeds the threshold value, rewarding the
customer with compensation.

17. (Previously Presented) The method of claim 15, further comprising:
comparing the measured wait-time to a threshold value; and
if the threshold value exceeds the measured wait-time, rewarding an
employee of the service establishment.

18. (Original) The method of claim 15, where receiving the signal at the
first checkpoint includes receiving the signal when the customer reaches a point-
of-entry to the service lane.

19. (Original) The method of claim 15, where receiving the signal at the
first checkpoint includes receiving the signal when the customer reaches a point at
which customers place orders with the service establishment.

20. (Original) The method of claim 15, where receiving the signal at the
first checkpoint includes receiving the signal when the customer reaches a service
window or service counter.

21. (Original) The method of claim 15, where receiving the signal at the
second checkpoint includes receiving the signal when the customer reaches a
service window or service counter.

22. (Original) The method of claim 15, where receiving the signal at the second checkpoint includes receiving the signal when the customer reaches a point-of-exit from the service lane.

23. (Previously Presented) A network of computer systems for use in providing services to customers of a group of service establishments, the network comprising:

(a) local computer systems that are located at the service establishments, each of which is configured to:

collect information identifying customers of the service establishment and information about previous transactions with those customers; and

when a customer is visiting the service establishment:

receive information identifying that customer;

assess the quality-of-service received by the customer during the visit; and

if the quality-of-service received by the customer during the visit is below a quality-of-service threshold, assist in delivering an offer to compensate the customer for the inadequate service; and

(b) a data-warehouse system configured to:

receive from each of the local computer systems the information about the products and services purchased by customers and the information identifying those customers; and

when a customer is visiting one of the service establishments, receive from the service establishment the information identifying that customer and, in response, deliver to the service establishment information about the products or services previously purchased by that customer for use in delivering the offer to the customer.

24. (Previously Presented) A computer system for use by a service establishment in providing services to a customer, the system including an executable program that causes the computer to:

receive a signal acquired from a device carried by the customer during a visit to the service establishment;

receive information that allows identification of the customer;

use this information to identify the customer and to retrieve archived information about previous interactions with the customer;

analyze the archived information to identify a product or service of interest to the customer;

assess the quality-of-service received by the customer during the visit;

decide that the quality-of-service received by the customer during the visit was below a quality-of-service threshold; and

before the customer leaves the service establishment, create an offer to deliver the product or service to the customer at a discount.

25. (Canceled)

26. (Previously Presented) The system of claim 24, where, in assessing the quality-of-service received by the customer during the visit, the computer measures the amount of time taken to serve the customer and compares the measured amount to a threshold amount.

27. (Original) The system of claim 26, where the computer uses the archived information about previous interactions with the customer in calculating the threshold amount.

28. (Previously Presented) The system of claim 24, where, in assessing the quality-of-service received by the customer, the computer measures the amount of time that the customer waits in a service lane provided by the service establishment.

29. (Original) The system of claim 28, where, in measuring the amount of time that the customer waits in the service lane, the computer:

initiates a time-monitoring sequence upon receiving the signal acquired from the device carried by the customer; and

ends the time-monitoring sequence when the customer reaches a checkpoint in the service lane.

30. (Previously Presented) The system of claim 28, where, in measuring the amount of time that the customer waits in the service lane, the computer:

receives a signal acquired from the device when the customer reaches a first checkpoint; and

receives another signal acquired from the device when the customer reaches a second checkpoint.

31. (Original) The system of claim 28, where, in measuring the amount of time that the customer waits in a service lane, the computer measures the customer's waiting-time in a drive-thru service lane provided by the service establishment.

32. (Original) The system of claim 31, where, in receiving a signal acquired from a device carried by the customer, the computer receives a signal acquired from a transponder carried on the customer's automobile.

33. (Original) The system of claim 24, where the computer requests the archived information from a database system.

34. (Original) The system of claim 24, where, in retrieving the archived information, the computer retrieves information collected by the service establishment during one or more previous visits by the customer.

35. (Original) The system of claim 24, where, in retrieving the archived information, the computer retrieves information about the customer collected and shared by more than one service establishment.

36. (Original) A computer system for use by a service establishment in measuring a customer's wait-time in a service lane, the system including an executable program that causes the computer to:

receive a first signal acquired from a device carried by the customer when the customer reaches a first checkpoint;

initiate a time-monitoring sequence upon receiving the first signal;

receive a second signal acquired from the device when the customer reaches a second checkpoint; and

end the time-monitoring sequence upon receiving the second signal.

37. (Original) The system of claim 36, where the computer receives the first signal when the customer reaches a point-of-entry to the service lane.

38. (Original) The system of claim 36, where the computer receives the first signal when the customer reaches a point at which customers place orders with the service establishment.

39. (Original) The system of claim 36, where the computer receives the first signal when the customer reaches a service window or service counter.

40. (Original) The system of claim 36, where the computer receives the second signal when the customer reaches a service window or service counter.

41. (Original) The system of claim 36, where the computer receives the second signal when the customer reaches a point-of-exit from the service lane.

(IX) EVIDENCE APPENDIX

Not applicable

(X) RELATED PROCEEDINGS APPENDIX

Not applicable